

Evaluation of Irritable Bowel Syndrom in AL-Diwanyia City.

-ALI TALIB N. ALDAMARCHI Medical College / Al Quadisyia University, Iraq.

- USAMA TAHHER MUSLEM Medical College / Al Quadisyia University, Iraq.

- ALI MOHAMMED HUSSEIN AL-YASSIN Consultant physician Diwanyia teaching hospital, Iraq.

الخلاصة

متزامنة تهيج القولون من الأمراض الشائعة التي تصيب الرجال و النساء على حد سواء, كبارا كانوا أم صغارا . ثلث مرضى عيادات أطباء الجهاز الهضمي هم مرضى متزامنة تهيج القولون وأغلبهم يشعرون بإحباط و عجز عن العمل و غير قادرين على إقامة علاقات اجتماعية, إضافة إلى الشعور بالقلق والانزعاج.الهدف هو دراسة انتشار المرض بين النساء والرجال و لكافة الأعمار وبيان تأثير المستوى الثقافي والعلمي على انتشار المرض ومدى تأثير التدخين عليه , إضافة إلى التوزيع الجغرافي للمرضى.اجريت الدراسة على مائتان وأربعة وستون مريضا يعانون من متزامنة تهيج القولون من مختلف الأعمار ولكلا الجنسين وبمعدل عمر المرضى هو 26.1 ± 1.2 سنة وكانت نسبة النساء أكثر من الرجال , ونسبة المتزوجون أكثر وهو مطابق لمعظم البحوث في دول العالم. معظم المرضى هم من الطبقة المتعلمة والساكين في المدن.غالبية المرضى يشعرون بعدم الرضا عن نتائج العلاج وفعاليتها.استنتج ان هذا المرض يصيب الأعمار الشابة ولكلا الجنسين وهذا يعني التأثير السلبي على أداء وإنتاج الكفاءات الشابة التي يعتمد عليهم البلد. هذه الدراسة تؤكد الحاجة إلى طرق علاجية حديثة من العلاج المعتمد في البلدان المتقدمة.

Abstract

Irritable bowel syndrome (IBS) is the most commonly diagnosed gastrointestinal condition that comprises 25-50% of all referral to gastroenterologists. IBS causes a great deal of discomfort and distress, but it does not permanently harm the intestines and does not lead to a serious disease, such as cancer.

To study the epidemiological aspect, clinical varieties and the response the available treatment in patients whom complaining of irritable bowel syndrome according to Rome criteria in al Diwaniya province in Iraq.

Two hundreds sixty four patients with variable clinical presentation of irritable bowel syndrome of different age groups and sexes were fully examined and investigated to exclude the organic disease. We used the chi square calculation in statistical analysis.

The mean age of patients in our study was 26.1 ± 1.2 that is mean higher prevalence in younger age group. There is an overall female predominance with more common in married than single. IBS can

distribute in smoker and nonsmoker with no significance difference. The most common presentation was the alteration of constipation and diarrhea. Most patients had an exacerbation of symptoms after an emotional stress or eating heavy meal. About 90% of patients fell un satisfactory response to available treatment.

This disorder mainly affects young patients of both sexes, so it has adverse effect on the performance and the productive power of country. More advanced treatment modalities adopted in developed countries needed to be evaluated and applied in our country.

Introduction

Irritable bowel syndrome (IBS) is a gastrointestinal syndrome characterized by chronic abdominal pain and altered bowel habits in the absence of any organic cause. It is the most commonly diagnosed gastrointestinal condition. The prevalence of IBS in North America estimated from population-based studies is approximately 10 to 15 percent [1-6]. A population based study in Europe found an overall prevalence of 11.5 percent (a value similar to that noted in reports in the United States); however, the prevalence varied widely among countries [7] and we don't have an estimate about the prevalence of this syndrome in Iraq because of paucity of studies conducted in this regard in our society.

IBS affects men and women, young patients and the elderly. However, younger patients and women are more likely to be diagnosed with IBS. A systematic review estimated that there is an overall 2:1 female predominance in North America [3]. Only 15 percent of those affected actually seek medical attention [1, 2, 8, 9]. Nevertheless, the absolute number of patients is still so large that IBS comprises 25 to 50 percent of all referrals to gastroenterologists [10]. IBS also accounts for a significant number of visits to primary care physicians, and is the second highest cause of work absenteeism after the common cold [11]. One estimate suggests that the total direct cost of IBS (including inpatient and outpatient health services) was greater than \$1.7 billion in the United States in 2000 [12]. Patients with IBS can present with a wide array of symptoms which include both gastrointestinal and extra intestinal complaints. However, the symptom complex of chronic abdominal pain and altered bowel habits remains the nonspecific yet primary characteristic of IBS [13].

Most people can control their symptoms with diet, stress management, and prescribed medications. For some people, however, IBS can be disabling. They may be unable to work, attend social events, , or even travel short distances(14,15).

IBS is characterized by the presence of abdominal discomfort or pain associated with disturbed defecation (16). Bloating or visible abdominal distention often are present in patients with IBS but are not considered essential for diagnosis (16).

In a classic study from the United Kingdom, Manning and associates first reported that six symptoms were more frequent in those subsequently documented to have IBS (abdominal pain that is relieved after bowel movement, looser stool at pain onset, more frequent stools at pain onset, visible abdominal distention, sensation of incomplete rectal evacuation and passage of mucus)(17). Later studies showed that these studies were specific, but not sensitive, for identifying IBS and were of greater diagnostic value in women. (18,19). In an effort to build up the diagnostic utility of the Manning criteria, the Rome (I&II) were created following a formal consensus process to provide a standard for a clinical research (16). Supportive symptoms that are not part of the Rome III criteria include: abnormal stool frequency (3 bowel movements per week or >3 bowel movements per day); abnormal stool form (lumpy/hard or loose/watery), defecation straining, urgency, or a feeling of incomplete bowel movement, passing mucus and bloating.

Four subtypes of IBS were also recognized:

1. IBS with constipation (hard or lumpy stools \geq 25 percent and loose (mushy) or watery stools <25 percent of bowel movements).
2. IBS with diarrhea (loose (mushy) or water stools \geq 25 percent and hard or lumpy stools <25 percent of bowel movements).
3. Mixed IBS (hard or lumpy stools 25 percent and loose (mushy) or watery stools 25 percent of bowel movements).
4. Unsubtyped IBS (insufficient abnormality of stool consistency to meet the above subtypes).

The Rome criteria have been criticized for overemphasis on abdominal pain and failure to emphasize postprandial urgency, abdominal pain, and/or diarrhea (20). As a result, some investigators continue to use the Manning criteria or a combination of both. Other criteria have also been proposed (such as the Kruis criteria) but are uncommonly used (21-23).

A number of studies have assessed the accuracy of the Rome and Manning criteria in a variety of practice settings (18). Although the overall sensitivity and specificity are high, results in individual studies have been variable, providing a rationale for ongoing studies that are attempting to further refine these criteria (24).

Furthermore, the predictive values of the criteria depend upon the prevalence of IBS and organic disease in the individual practice setting.

Considering the available data and the above limitations, a consensus statement issued by the American Gastroenterological Association recommends that the diagnosis of IBS should be based upon the identification of positive symptoms consistent with the condition (as summarized by the Rome criteria) and excluding in a cost-effective manner other conditions with similar clinical presentations.

Rome II criteria

At least 12 weeks (which need not to be consecutive) in the past 12 months of abdominal discomfort or pain associated with two of the following three features:

Relieved with defecation; and/or Onset associated with pain and a change in frequency of stool; and/or onset associated with change in form (appearance) of stool (25).

Patients and Method

During the period between April to October 2007, patients who attending the outpatient clinic for internal diseases in Al-Diwaniya teaching hospital, with chronic (\geq year) symptoms of : (abdominal pain, altered bowel motion in the form of diarrhea, constipation, or mixture of both, abdominal bloating & distention with or without mucus rectal discharge) were subjected to formal questioner and physical examination. All patients whose enter the study undergo full examination , chest X ray , ultrasound of abdomen , general stool examination, hematological tests including hemoglobin ,WBC count and differential, and ESR , thyroid function test, and biochemical tests including blood sugar, liver enzymes and serum amylase. Upper endoscopy and/or sigmoidoscopy were done to some patients were normal. Patients who had symptoms or signs pointing to organic disease were fully investigated to detect the cause. Patients who fulfilled Rome II criteria were included in the study, and those who had alarming symptoms (gastrointestinal bleeding, anorexia, significant weight loss, nocturnal diarrhea)or those who were discovered during physical examination or diagnostic investigations to have an organic cause for their symptoms were excluded from the study.

Two hundred sixty four patients from both sexes were included in this study with age ranging from sixteen to sixty five years with a mean age \pm SD of 26.1 \pm 1.2 years.

Result were expressed as mean \pm SD. Chi square calculation were used and $P < 0.05$ considered significant.

Results

Table (1) presents the sex distribution, which demonstrate that the predominate sex was female (145 female and 119 male) with P value >0.05 that is no statistically significant of sex on the disease. This table also shows the marital state of both sexes, about 64% of female were married and about 60% of male were married.

Sex	No.	Marital		Percentage
		Married	Single	
Male	119	71	48	59.6%
female	145	92	53	61.1%

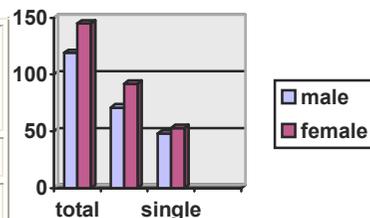


Table (2) shows the different age groups in both sexes. This table, demonstrate that the predominate of young age groups in both sexes. About 84% of male patients were below the age of forty, and 79% of female patients were below the age of forty. The P value assessment between the first two age groups and the last age group was <0.05 that is mean the significant effect of age.

Sex	<20 Years	20-30 Years	30-40 Years	40-50 Years	>50 years
Male	10	53	37	16	3
Female	19	51	45	22	8

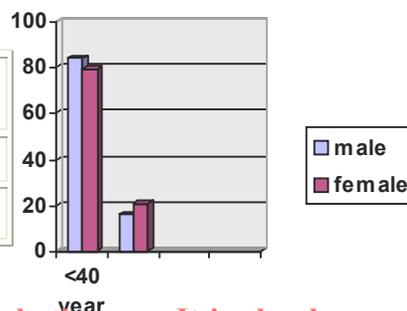


Table (3) shows the distribution of smoking in both sexes. It is clearly appear that smoker patients more common in male group, but with no significant different between smoker and nonsmoker, that is mean no significant effect of smoking on the distribution of the disease.

	Smoke	Ex. smoke	Passive sm.	Non smoker
male	23	37	4	55
female	12	5	46	82

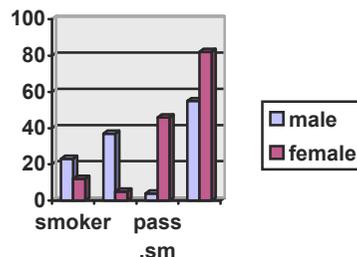


Table (4) demonstrates the educated level of patients of both sexes, and appears that the

disease is distributed among the educated group more than non educated group. More than 80% of female and more than 75% of male had the secondary degree or more. The P value assessment was <0.05 that is consider significant.

	Post grad.	College	Secondary	Primary	Nil
Male	18	25	47	14	15
Female	16	38	59	20	12

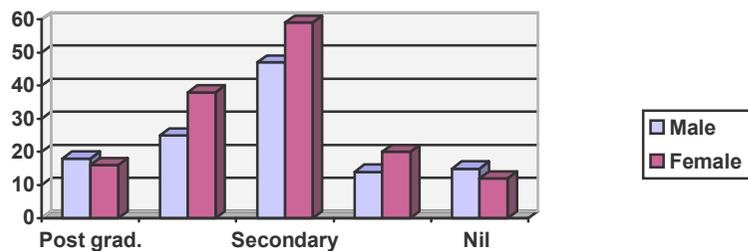


Table (5) show the area of patients where lived and the social class of patients. 77% of patients were lived in the urban area and 23% of them were lived in the rural area. About 75% of patients were belong to the intermediate social class.

	address		social class		
	rural	Urban	high	intermediae	poor
male	18	91	12	90	17
Female	34	111	10	100	35

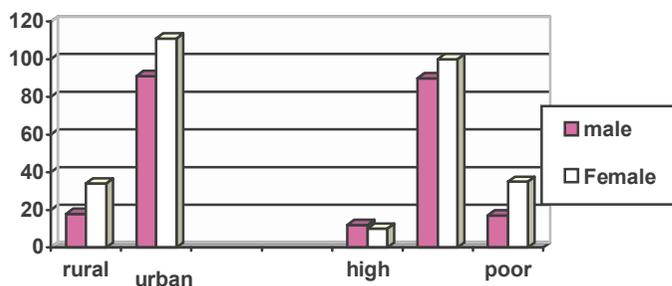


Table (6) shows the clinical presentation of IBS and its duration. About 43% of male and 46% of female had an alternating symptoms of diarrhea and constipation. All patients taken in the study manifested of abdominal pain or distention, majority of them fell well after pass motion.

	clinical presentation			Duration		
	IBS /contp.	IBS/diar	Alter	1 years	1-3 years	>3 years
Male	36	31	52	19	46	54
Female	38	40	67	21	60	64

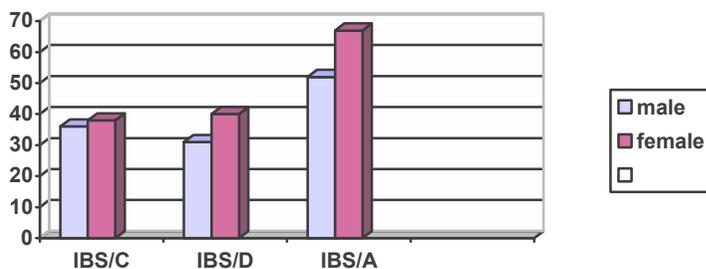
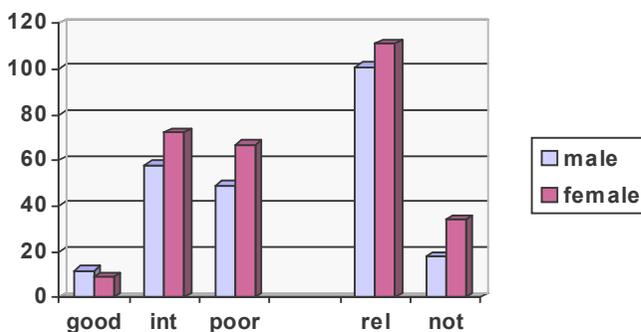


Table (7) demonstrates the effect of stress on the exacerbation of the disease symptoms and the treatment response in both sexes. More than 90% of patients fell an unsatisfactory response to treatment, and 80% of patients had an experience exacerbation of the symptoms after an emotional stress.

	Response to treatment			Effect of stress	
	Good resp.	Interm. Res	Poor resp.	Related	Not related
Male	12	58	49	101	18
Female	9	72	64	111	34



Discussion

The mean age in our study population is 26.1 ± 1.2 years pointing to crucial fact proved by other population - based studies that IBS has higher prevalence in younger age group .generally its believed that IBS is uncommon in the elderly, but it seems likely that IBS in the elderly is often under diagnosed or misclassified as diverticular disease for example (26). Female patients appeared to get higher prevalence in this study than males , a result which seems compatible with other population- based studies that all pointed to female predominance (16-28).

In clinical practice in the United States, women outnumber men, which is partly explained by increased health care- seeking behavior among women; this appeared to be culturally derived, because data from India indicate more men than women present for care for IBS; this does not mean that more men than women have IBS in India (28). Probably this explanation holds true in Iraqi society as well because women often seek medical care more frequent than men.

Healthy women have greater rectal sensitivity, slower colonic transit, and smaller stool output than do men, which may explain why certain symptoms, such as straining and passage of hard stools, seems to be more common in women (29,30). In this study it's obvious that most patients are of intermediate social class and the most prevalent level of education was the intermediate level (secondary school & college graduates) however, these facts mostly reflects the normal economic & educational distribution of the Iraqi society rather than pointing to specific etiologic relation.

The bigger size of the urban group can be explained in two ways: either by better access to medical care in urban area or by increased exposure to stressful events imposed by civilized society in cities reflected functionally as IBS like symptoms.

This also may explain the higher percentage of married versus single patients reflecting the impact of pregnancy, child raising and marital problems on the bowel since it's a well established fact that a history of sexual, emotional & physical abuse is reported more often in patients with IBS than in those without this illness.(31,32) and sustained stress could be an important factor in both onset and persistence of IBS by enhancing visceral pain perception , by activating the area of midcingular cortex, an area that process visceral signals.(33,34)The clinical subtypes of IBS are seen to be equally represented in the study sample population. in a study from Olmsted county, Minnesota, the shares were also nearly equal (35).However its unclear if those with predominant symptom (i.e. diarrhea or constipation),if followed long enough, eventually will develop the other(i.e. constipation or

diarrhoea),but some data from primary care support this assumption (36).In addition, the definitions of IBS groups are still arbitrary and to some extent subjective.The response to treatment has been unsatisfactory in the great majority of patients. The drugs that were assessed are drugs available in the Iraqi market and include: anti spasmodic (cholinergic & non cholinergic), anti diarrhoeal,, laxatives, prokinetic drugs and antidepressant & anxiolytics in addition to simple no pharmacologic measures such as dietary modifications and simple psychological support. However the treatment of IBS is challenging and the results of the available studies regarding their efficacy are conflicting, while a meta-analysis of 23 randomized controlled trials concluded that antispasmodics were superior to placebo in the treatment of IBS (37),they have not been shown to more effective than placebo in other studies. Moreover, the effect of other drugs not widely available in Iraq such as serotonin receptor drugs and other treatment modalities such as psychotherapy, hypnotherapy & and behavioral cognitive therapy (CBT) have not been assessed in this study.

Conclusions and Recommendations

1. Irritable bowel syndrome is a common gastrointestinal disorder of high prevalence and a great impact on the society & patients life.
2. the disorder mainly affects the young age group of both sexes, so it has an adverse effect on the performance & the productive power of the whole country.
3. The different clinical varieties are present in nearly even distribution in our society & there seems to be an influence of different life stressors on the prevalence of the disease.
- 4.the response to the available treatment is often un satisfactory and more advanced treatment modalities adopted in developed countries need to be evaluated & applied in Iraq.

References

- Talley, NJ, Zinsmeister, AR, Van Dyke, C, et al. Epidemiology of colonic symptoms and the irritable bowel syndrome. *Gastroenterology*; 101:927. 1991.
- Drossman, DA, Zhiming, L, Andruzzi, E, et al. US householders survey of functional gastrointestinal disorders: Prevalence, sociodemography, and health impact. *Dig Dis Sci*; 38:1569. 1993.
- Brandt, LJ, Bjorkman, D, Fennerty, MB, et al. Systematic review on the management of irritable bowel syndrome in North America. *Am J Gastroenterol*; 97:S7. 2002.
- Hahn, BA, Saunders, WB, Maier, WC. Differences between individuals with self-reported irritable bowel syndrome (IBS) and IBS-like symptoms. *Dig Dis Sci*; 42:2585. 1997.
- Saito, YA, Locke, GR, Talley, NJ, et al. A comparison of the Rome and Manning criteria for case identification in epidemiological investigations of irritable bowel syndrome. *Am J Gastroenterol*; 95:2816,2000.
- Thompson, WG, Irvine, EJ, Pare, P, et al. Functional gastrointestinal disorders in Canada: first population-based survey using Rome II criteria with suggestions for improving the questionnaire. *Dig Dis Sci*; 47:225. 2002.
- Hungin, AP, Whorwell, PJ, Tack, J, Mearin, F. The prevalence, patterns and impact of irritable bowel syndrome: an international survey of 40 000 subjects. *Aliment Pharmacol Ther*; 17:643. 2003.
- Jones, R, Lydeard, S. Irritable bowel syndrome in the general population. *BMJ*; 304:87. 1992.
- Heaton, KW, O'Donnell, LJ, Braddon, FEM, et al. Symptoms of irritable bowel syndrome in a British urban community: Consulters and nonconsulters. *Gastroenterology*; 102:1962. 1992.
- Everhart, JE, Renault, PF. Irritable bowel syndrome in office based practice in the United States. *Gastroenterology* 1991; 100:998.
- Schuster, MM. Diagnostic evaluation of the irritable bowel syndrome. *Gastroenterol Clin North Am*; 20:269. 1991.
- The Burden of Gastrointestinal Diseases. American Gastroenterological Association 2001.
- Lynn, RB, Friedman, LS. Irritable bowel syndrome. *N Engl J Med* 1993; 329:1940.
- Boyce, PM, Koloski NA, Talley NJ: Irritable bowel syndrome according to varying diagnostic .Are new Rome II criteria unnecessarily restrictive for research and practice? *Am J Gastroentol* 95:3176, 2000.

- Hillilia MT, Farkilla MA: Prevalence of irritable bowel syndrome according to different diagnostic criteria in a non selected adult population. *Aliment Pharmacol Ther* 20:339,2004.
- Drossman DA, Corazziari E, Tally NJ, et al: *Rome II: The Functional Gastrointestinal Disorder*, 2nd ed. Mclean, VA, Degnon, 2000.
- Manning, AP, Thompson, WG, Heaton, KW, Morris, AF. Towards a positive diagnosis of the irritable bowel. *Br Med J*; 2:653. 1978.
- Hammer, J, Talley, NJ. Diagnostic criteria for the irritable bowel syndrome. *Am J Med*; 107:5S. 1999.
- Tally NJ, Phillips SF, Melton LJ III, et al: Diagnostic value of Manning criteria in irritable bowel syndrome. *Gut* 31:77, 1990.
- Camilleri, M, Choi, MG. Irritable bowel syndrome. *Aliment Pharmacol Ther*; 11:3. 1997.
- Kruis, W, Thieme, C, Weinzierl, M, et al. A diagnostic score for the irritable bowel syndrome. Its value in the exclusion of organic disease. *Gastroenterology* 1984; 87:1.
- Frigerio, G, Beretta, A, Orsenigo, G, et al. Irritable bowel syndrome. Still far from a positive diagnosis. *Dig Dis Sci*; 37:164. 1992.
- Dogan, UB, Unal, S. Kruis scoring system and Manning's criteria in diagnosis of irritable bowel syndrome: Is it better to use combined?. *Acta Gastroenterol Belg* 1996; 59:225.
- Vanner, SJ, Depew, WT, Paterson, WG, et al. Predictive value of the Rome criteria for diagnosing the. *Am J Gastroenterol*; 94:2912. 1999.
- Thompson WG, Longstreth GF, Drossman DA, Heaton KW, Irvin EJ, Muller-Lisner SA. Functional bowel disorders and functional abdominal pain. *Gut*. 1999 Sep., 45(suppl 2) .1143-7.
- Bennet G, Tally NJ: Irritable bowel syndrome in the elderly. *Best Pract Res Clin Gastroenterol* 16:63, 2002.
- Thompson WG; Gender differences in irritable bowel syndrome. *Eur J Gastroenterol Hepatol* 9:299, 1997.
- Tally NJ, O keefe EA, Zinsmeister AR, Melton LJ III; prevalence of gastrointestinal symptoms in the elderly: A population based study. *Gastroenterology* 102:895, 1992.
- Lee OY, Mayer EA, Schmulson M, et al: Gender- related differences in IBS symptoms. *Am J Gastroenterol*. 96:2184,2001.
- Houghton LA, Lea R, Whorwell PJ: The menstrual cycle affects rectal sensitivity in patients with irritable bowel syndrome but not healthy volunteers. *Gut* 50:471, 2002.

- Drossman, DA, Talley, NJ, Leserman, J, et al. Sexual and physical abuse and gastrointestinal illness. *Ann Intern Med*; 113:882, 1990.
- Tally NJ, Fett SL, Zinsmeister AR: Self reported abuse and gastrointestinal disease in outpatients: Association with irritable bowel – symptoms. *Am J Gastroenterol.* 90:366,1995.
- Mertz H, Morgan V, Tanner G, et al: Regional cerebral activation in irritable bowel syndrome and control subjects with painful and nonpainful rectal distention. *Gastroenterology* 118:842, 2000.
- Naliboff BD, Derbyshire SW, Munakata J, et al: Cerebral activation in patients with irritable bowel syndrome and control subjects during rectosigmoid stimulation. *Psychosom Med* 63:365, 2001.
- Mearin F, Baro E, Roset M, *et al.* Clinical patterns over irritable bowel syndrome: symptom instability and severity variability. *Am J Gastroenterol* ; 99: 113-21. 2004.
- Mearin F, Balboa A, Badia X, et al: Irritable bowel syndrome subtypes according to bowel habit: Revisiting the alternating subtype. *Eur J Gastroenterol Hepatol* 15:165, 2003.
- Poynard T, Regimbeau C, Benhamou Y: Meta analysis of smooth muscle relaxants in the treatment of irritable bowel syndrome. *Aliment Pharmacol Ther* 15:355, 2001.